Creating an MTPX/XX Application

Millenium 3 and EB MTPX/XX software

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Part 1

System Parameter Settings

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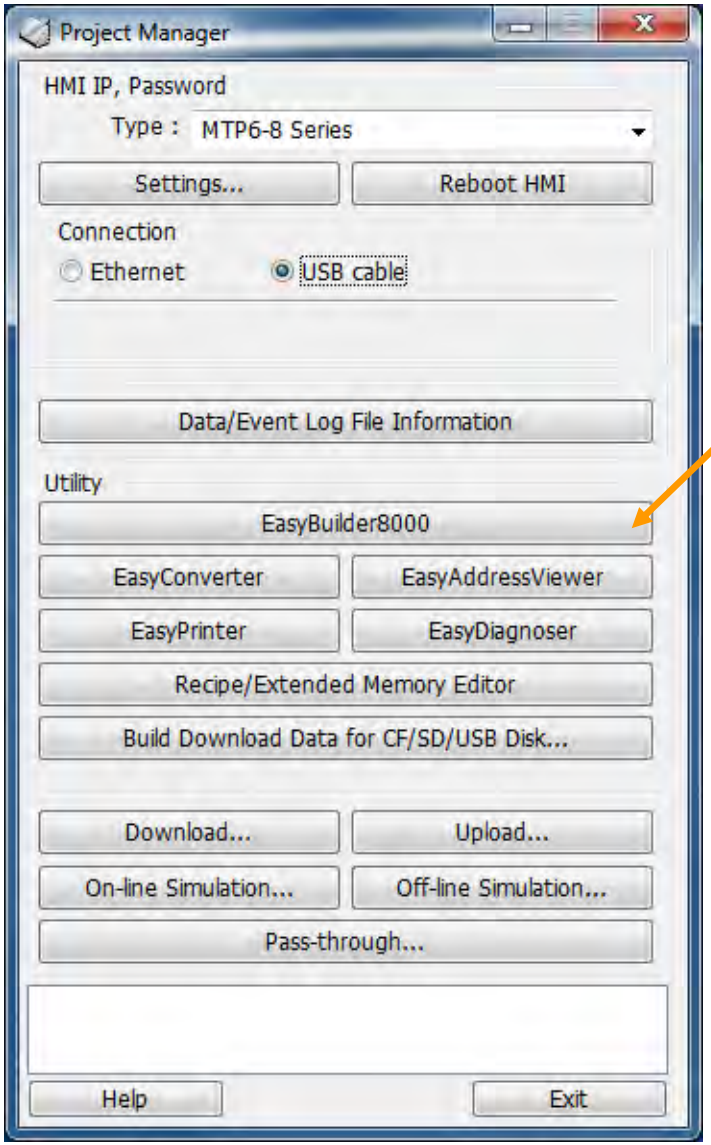
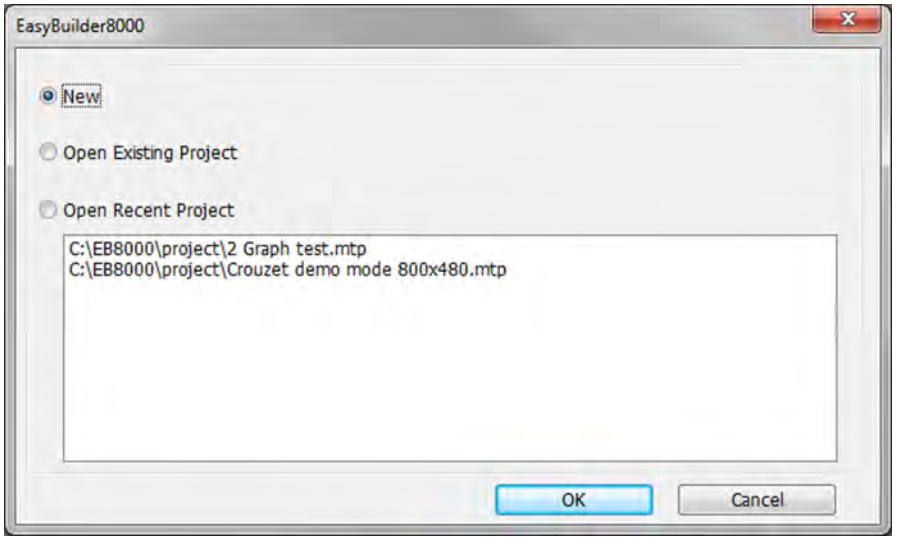
Creating a Project



After launching the EB software the *Project Manager* is opened first.

- Clicking on *EasyBuilder8000* opens the graphic editor

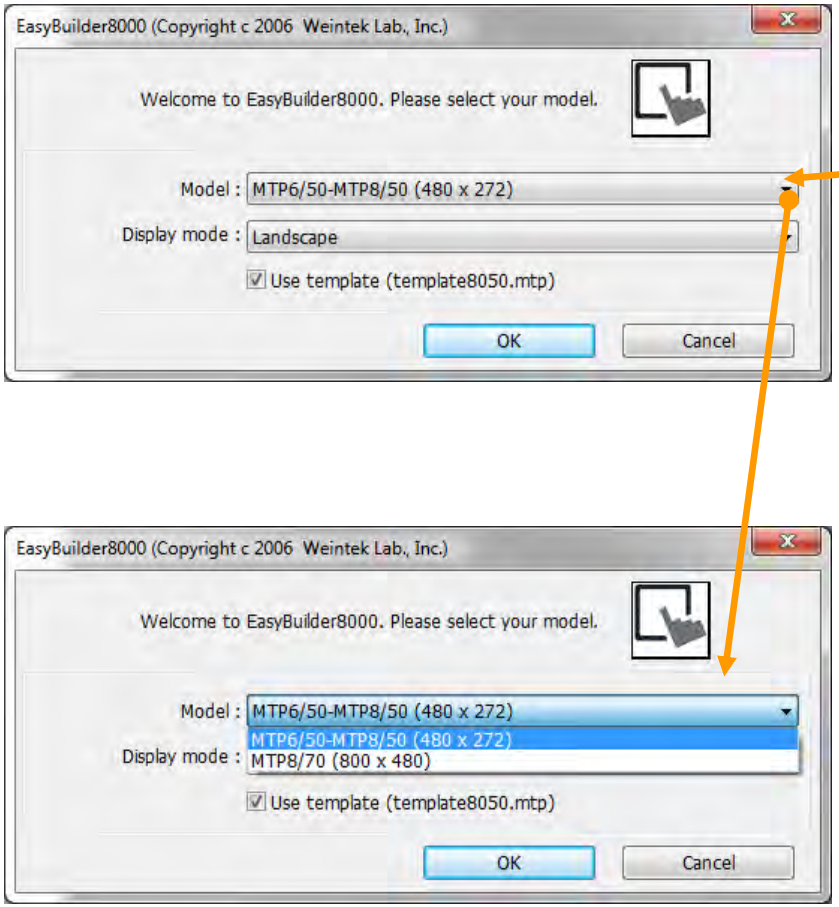
Creating a Project



In the window that opens one can select to

- Create a *New* project
- *Open* an *Existing Project*
- *Open* a *Recent Project*

Creating a Project

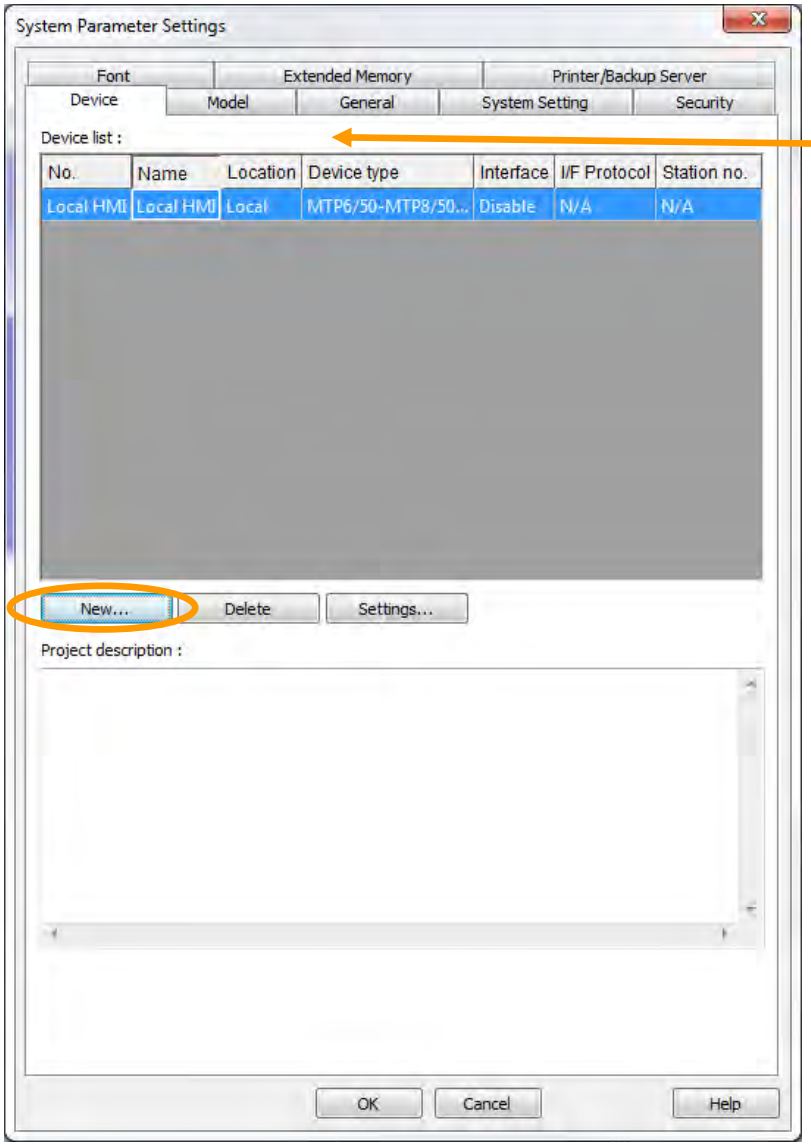


After selecting *New*, this screen will appear

- Select the HMI *Model* to be used and the *Display mode* of the project: *Landscape* or *Portrait*
- Then click *OK*

- NOTE: *Landscape* / *Portrait* mode can not be switched during project editing

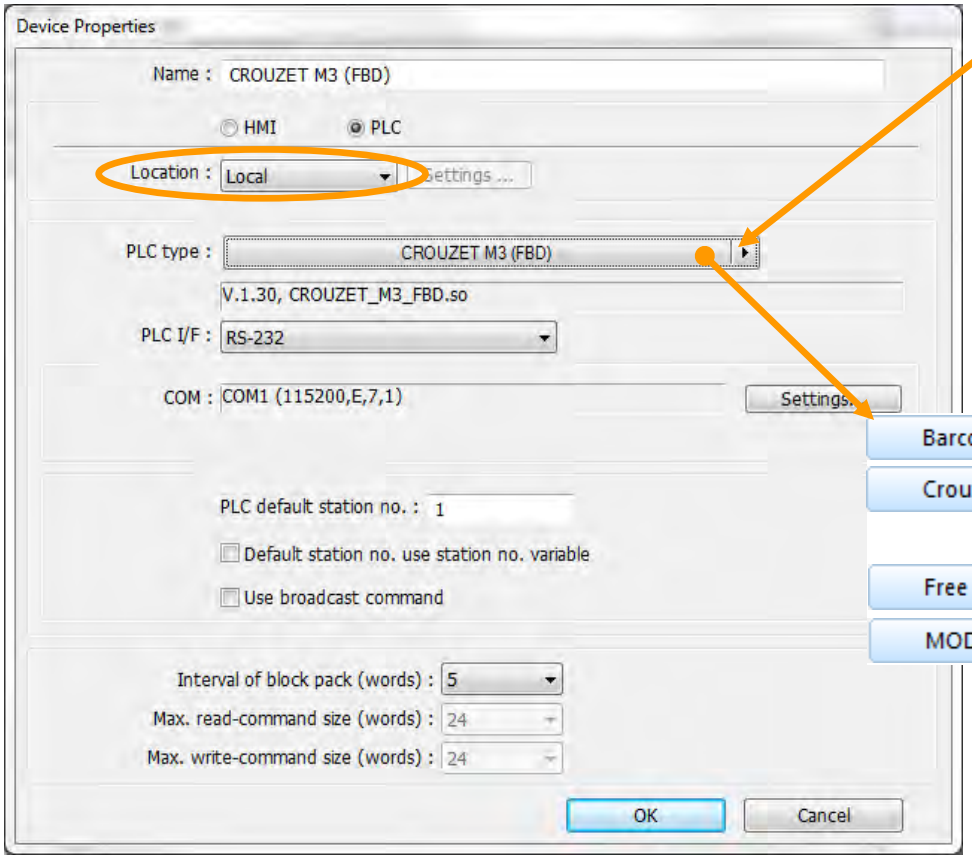
System Parameter Settings



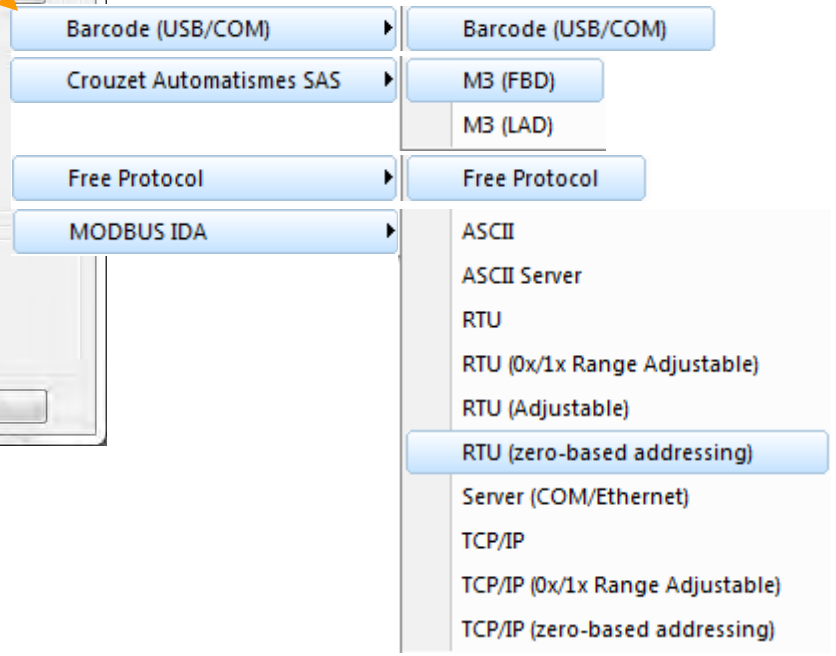
Once the HMI model has been selected, the *System Parameter Settings* menu opens the *Device list* tab

- Here we add the PLC/device which the screen will be connected to by clicking on *New*

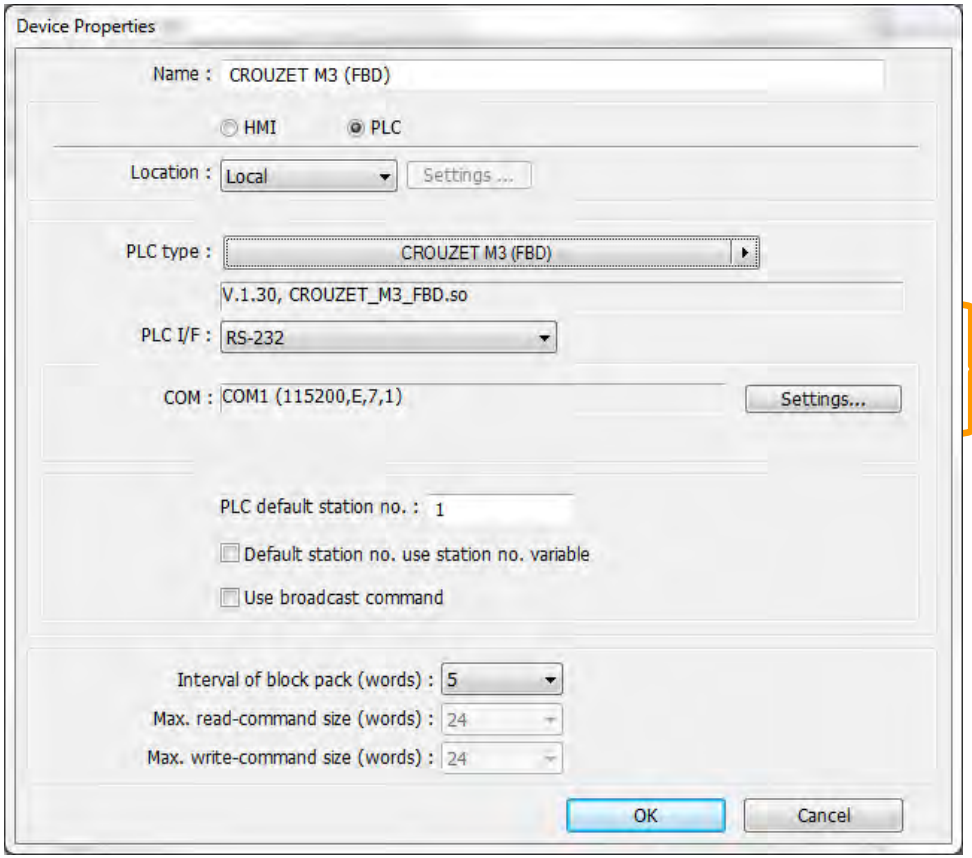
System Parameter Settings



- Clicking on *PLC type* opens the device selection list
  - If the device is directly connected to the HMI set *Local*, if it is connected through another HMI set *Remote*



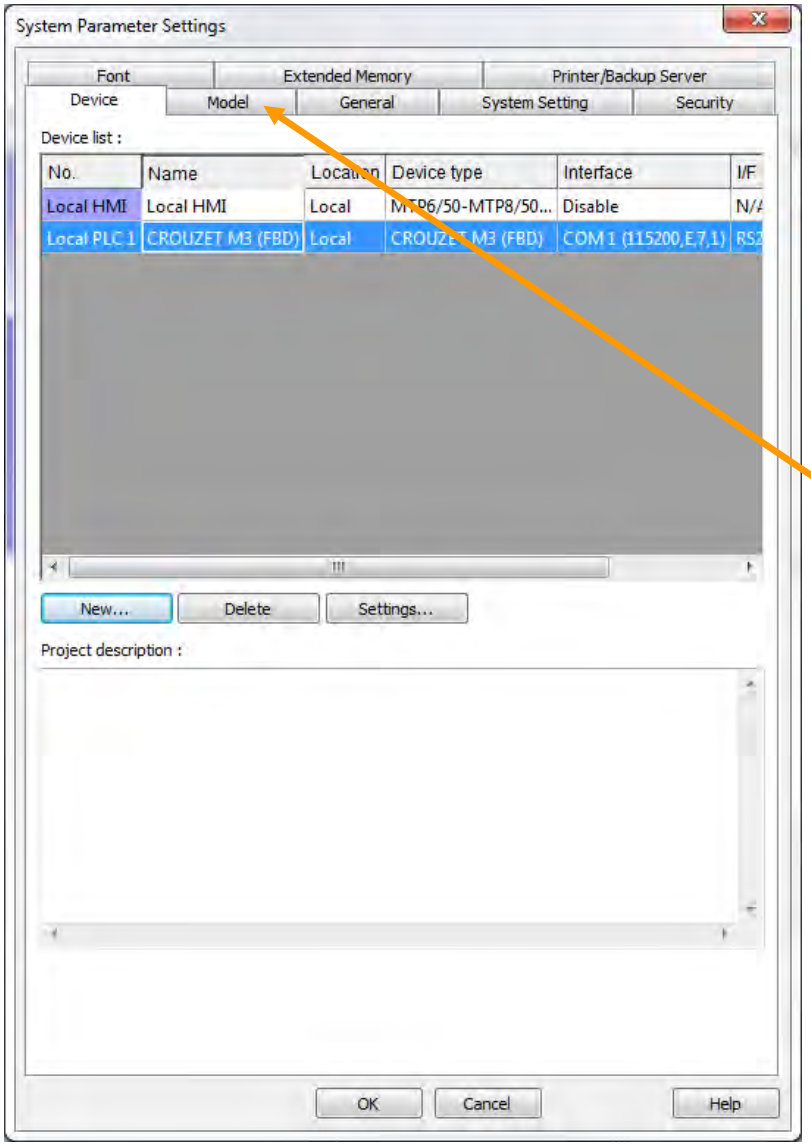
System Parameter Settings



After the *PLC type* has been selected click *OK*

The *COM* settings only need to be changed for On-line Simulation

System Parameter Settings



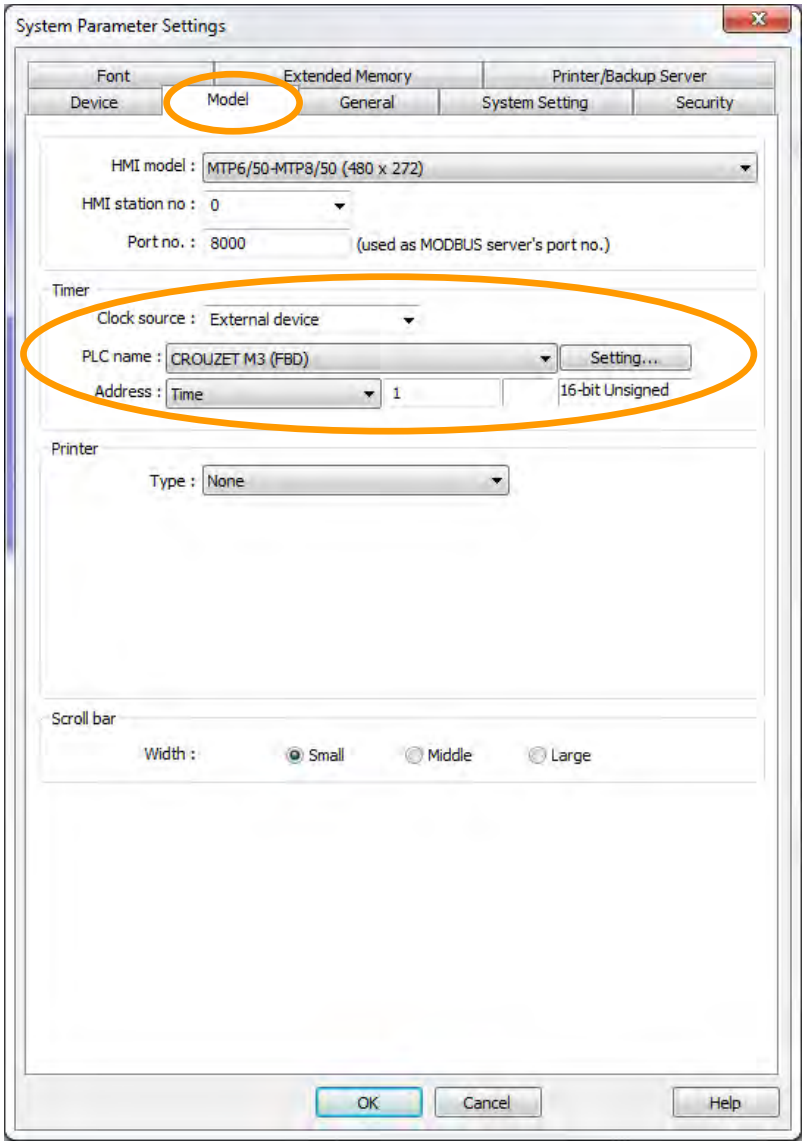
Millenium 3 is added to the *Device list.*

- Click *OK*

- The *System Parameter Settings* window can be reopened by an icon or from the *Edit* menu in the main tool bar of the graphical editor (programming window)

- The tab *Model* allows to take a finished project and use it in another screen without the need to rewrite the project or to copy and paste

Picking up Date & Time from the M3



If one wants to have the MTPX/XX pick up the M3 Date & Time:

- Open *System Parameter Settings*
- Open the *Model* tab
- In *Timer* define *External device* as the *Clock source*
- In *PLC name* select *CROUZET M3 (FBD)*
- Set *Address* to *Time 1*.
- Click *OK*

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Part 2

The Graphical Editor (programming window)

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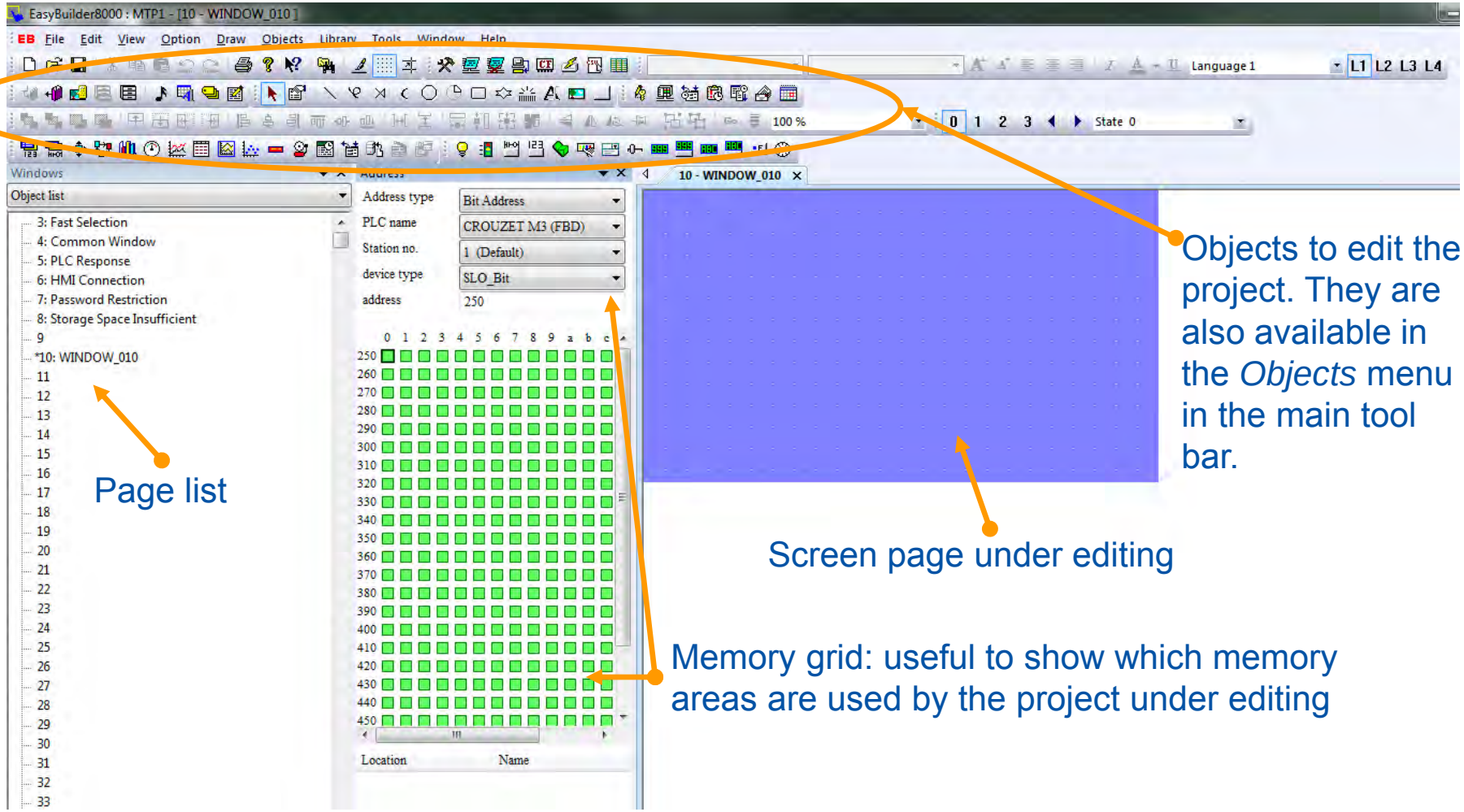
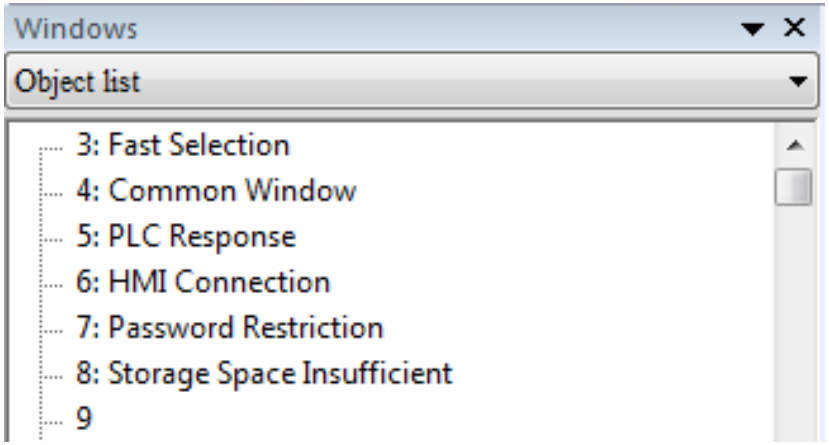
Graphical Editor

Once the setting page is closed, the graphical editor will be automatically displayed



Graphical Editor



- The first 9 pages of the project are *System pages*, used for managing the project
- The *Fast Selection* page is a pick list menu which allows to create a page changing menu not related to the page under editing. This function can be enabled or disabled by system settings or using a special bit
- *Common Window* is a *Layer Zero* page. Everything that is placed on this page, will be available in all project pages
- Pages 5 and 6 are pages related to a PLC communication failure. These pages can be resized and changed in format and attributes
- The *Password Restriction* page is displayed, if enabled, when an object which has been assigned to a safety class is accessed before logging in

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Part 3

Creating a ’display only’ Object

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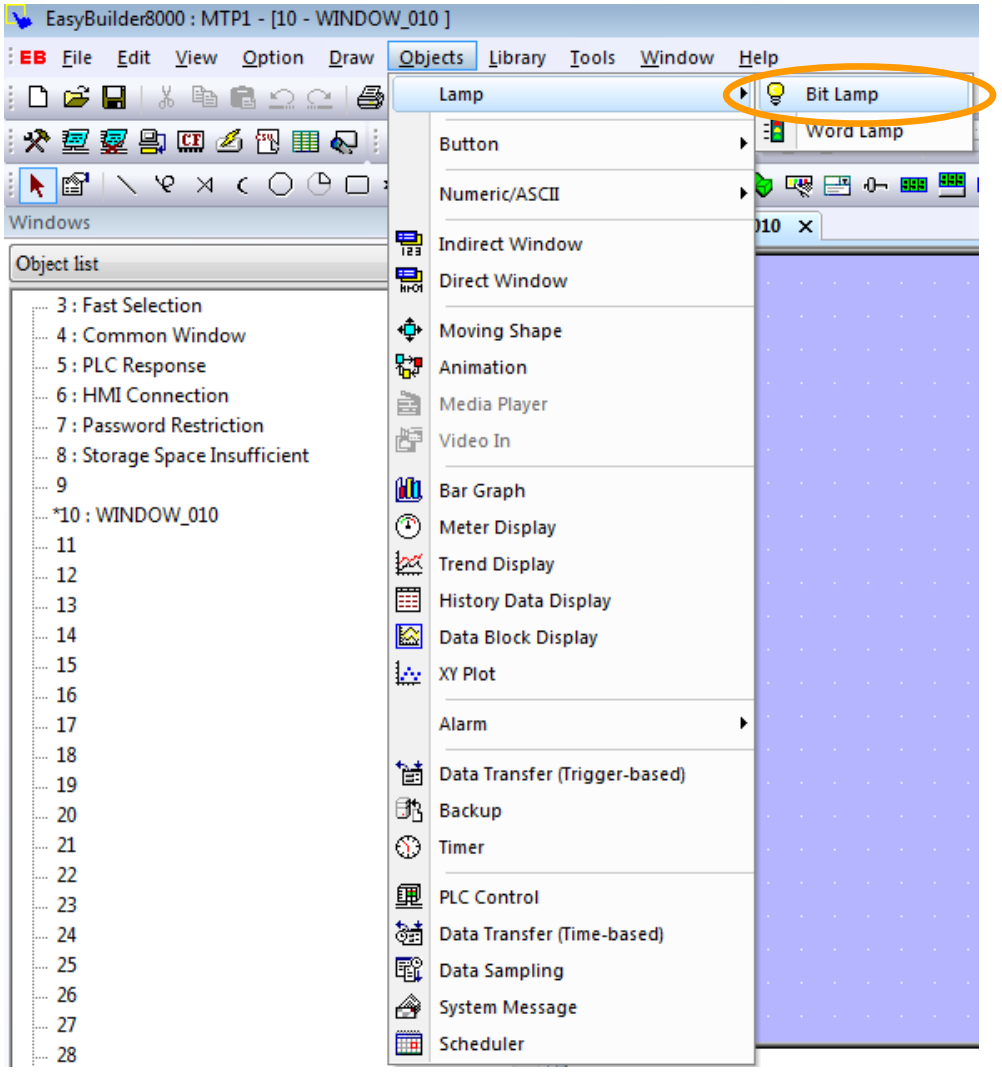
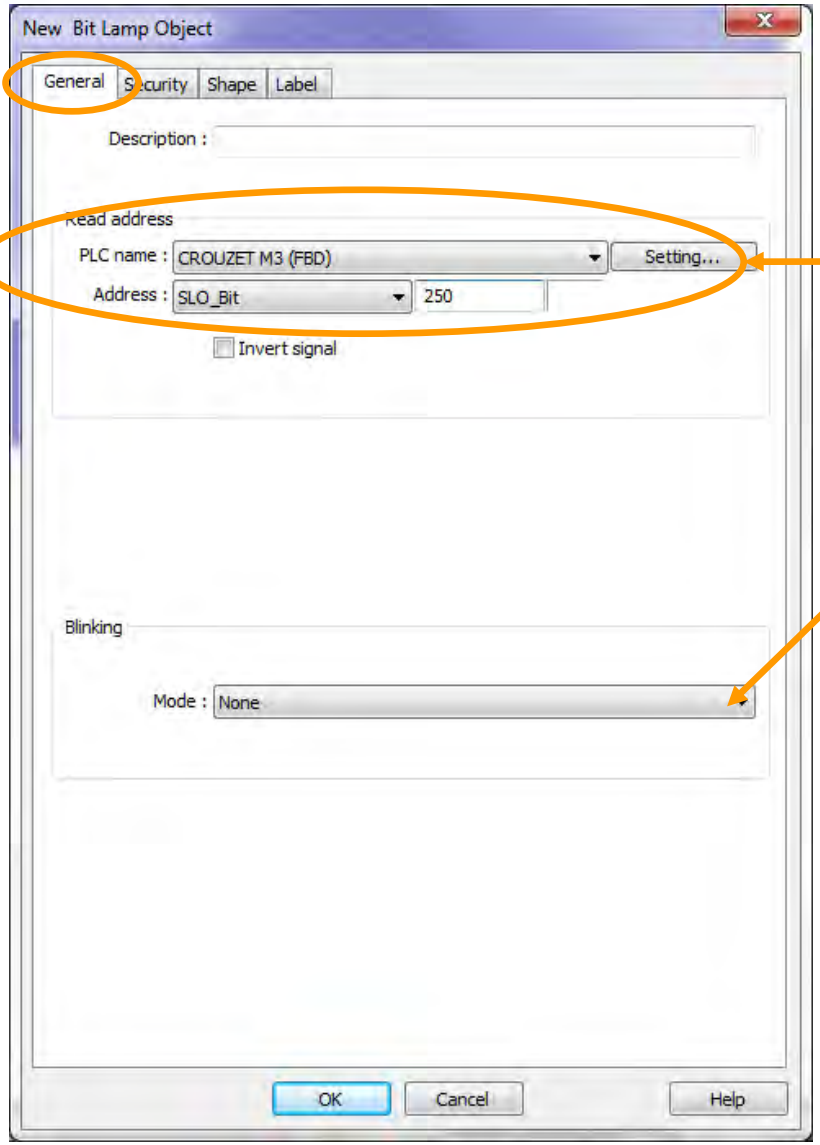
Creating an Object



Step 1

- Open *Objects*, *Lamp* and click on *Bit Lamp*

Creating an Object

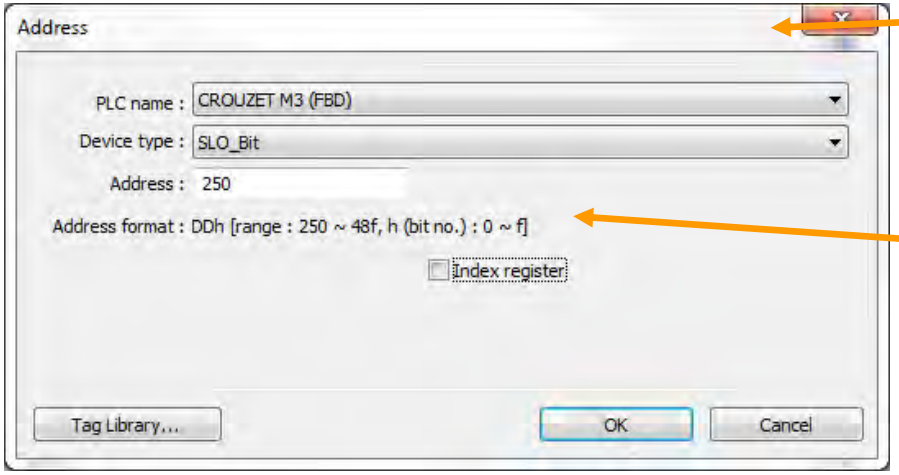


Step 2

This opens the window that allows to set the object parameters

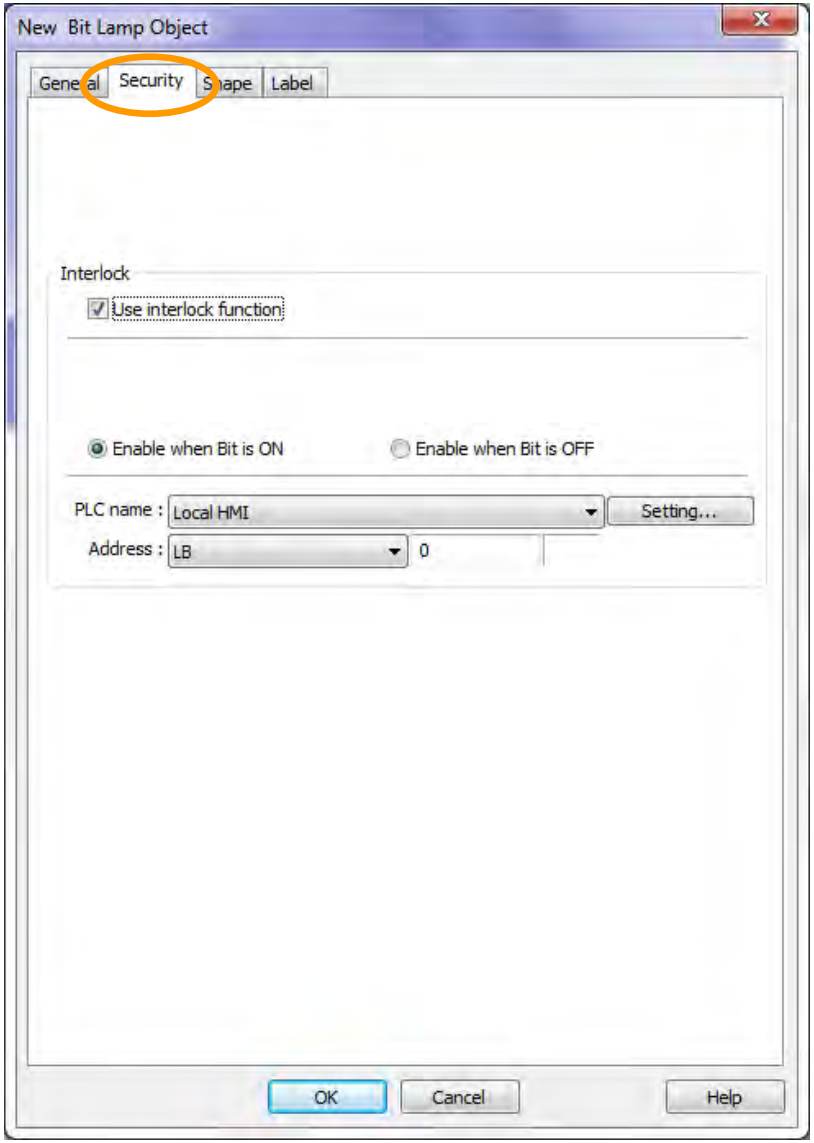
- In the *General* tab set the *Device* from which the variable is read, and the read *Address*
- It is also possible to set some specific object attributes like *Blinking*

Creating an Object



- A click on *Setting* in the *General* tab opens the access to the detailed device address setting area
- In this window the *Address format* is also shown, a reminder of the allowed address range and how it has to be written
- For details about M3 ⇔ MTP address settings please have a look at the *EB SLIn SLOut Addressing* document

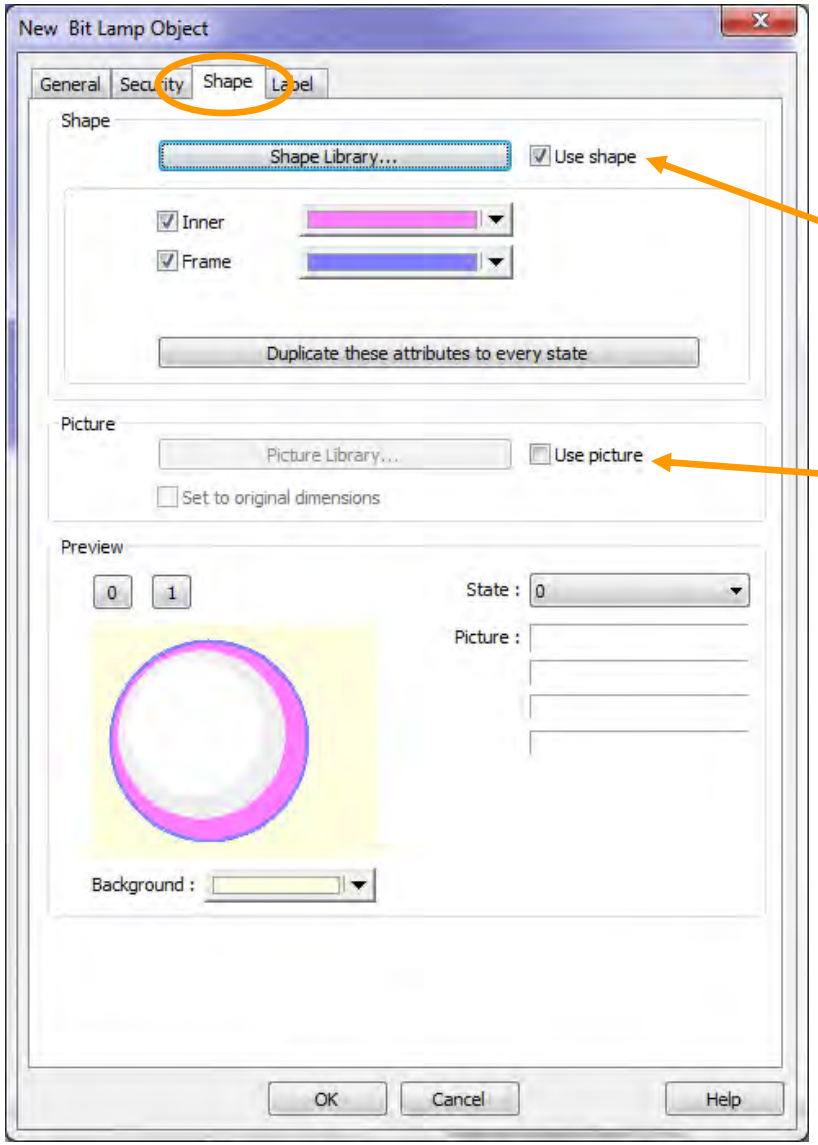
Creating an Object



Step 3

- In 'display only' objects like *Bit Lamp* or *Numeric Display*, the *Security* tab provides the possibility to make the object transparent if a designated bit is ON or OFF depending on the setting.

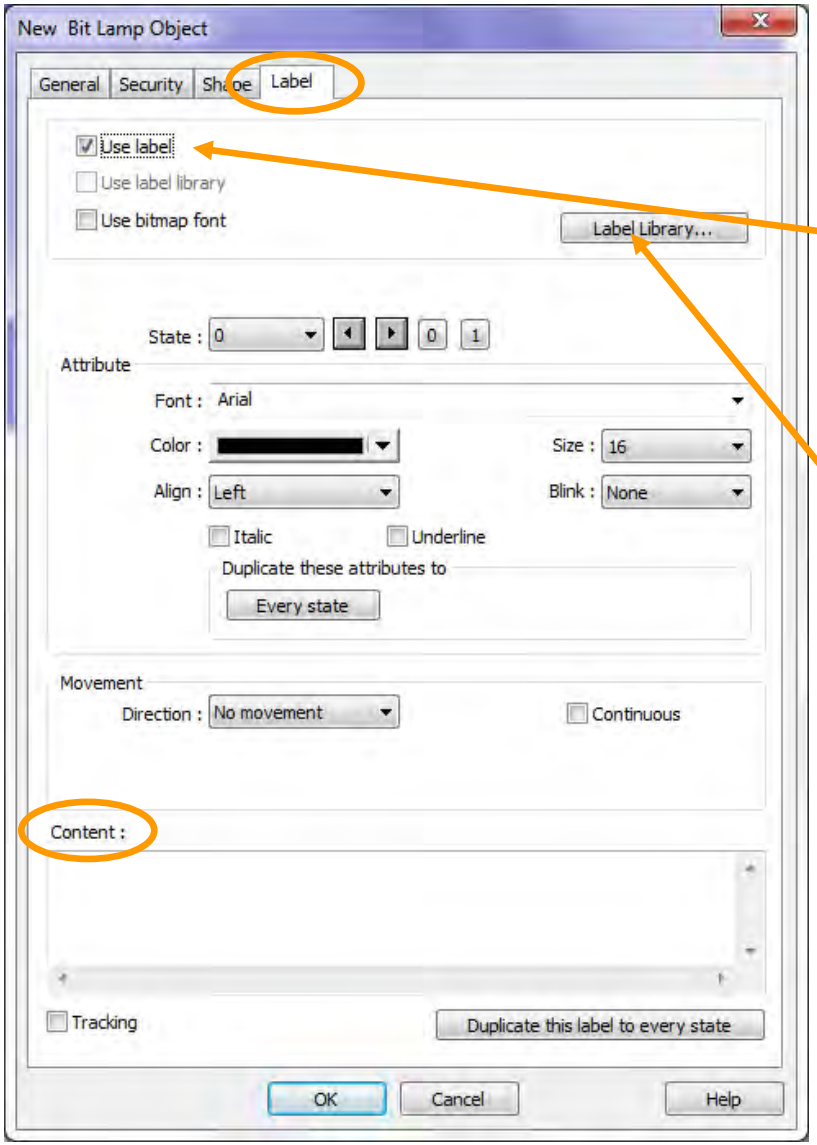
Creating an Object



Step 4

- In the *Shape* tab one can select the image to be connected to the object. One can choose between *Shape Libraries* (simple vector format shapes, very light, with colors that are easily modified) or *Picture Libraries* that one can create by adding ones own BMP, JPG, PNG or animated GIF images
- If none of these are selected the object will not have any image

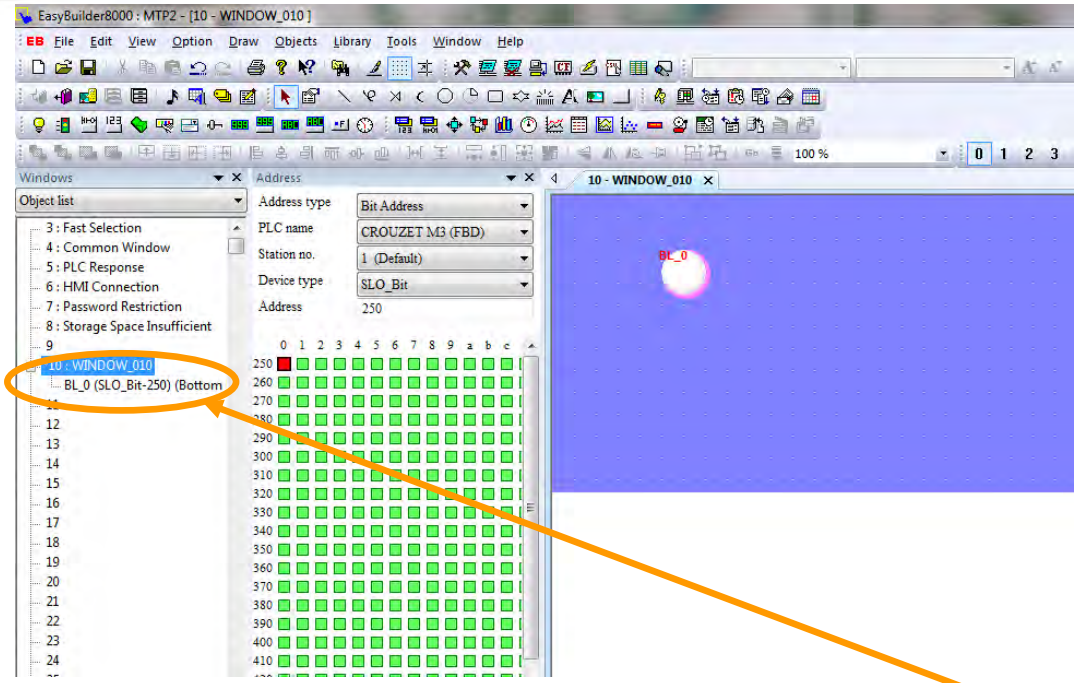
Creating an Object



Step 5

- In the *Label* tab it is possible to activate a text for the object.
- When *Use label* is marked one can directly enter the text that is to be displayed in the *Content* windows for state 0 and 1. It is possible to add a different color or text dimension to each state.
- *Attention*: this written text is not a multi language type. A *Label Library* has to be created in advance if multi language text is needed. It can be exported or imported via excel. Once the table has been created, *Use label library* can be marked in order to select the labels.
- If *Use label* is not marked, the object will show only an image.

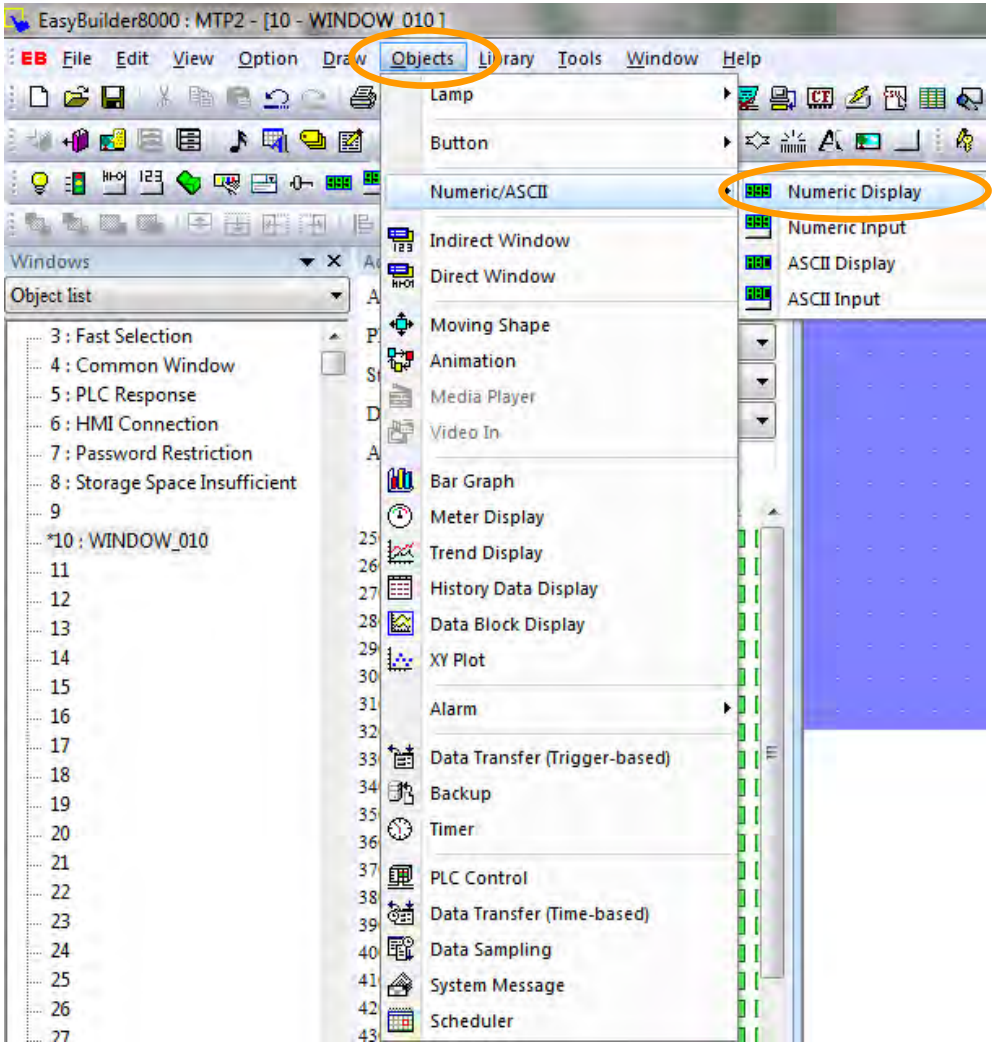
Creating an Object



Step 6

- After setting the object parameters click *OK*
- This closes the parameter setting window and the object can be placed by a click into the project window
- Afterwards the object can be resized, repositioned, and the settings window reopened by double click on the object itself, or by double click on the object description in the window view

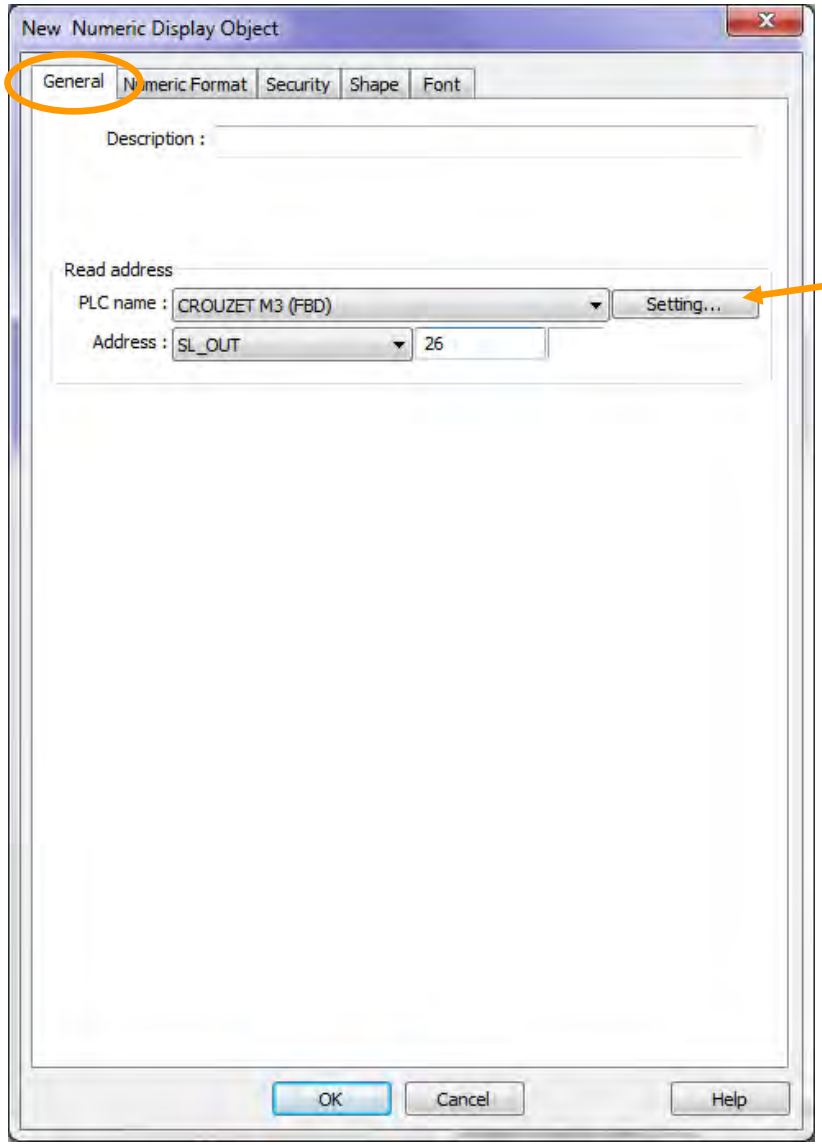
Creating a Numeric Display Object



Step 1

- Open *Objects*, *Numeric/ASCII* and click on *Numeric Display*

Creating a Numeric Display Object

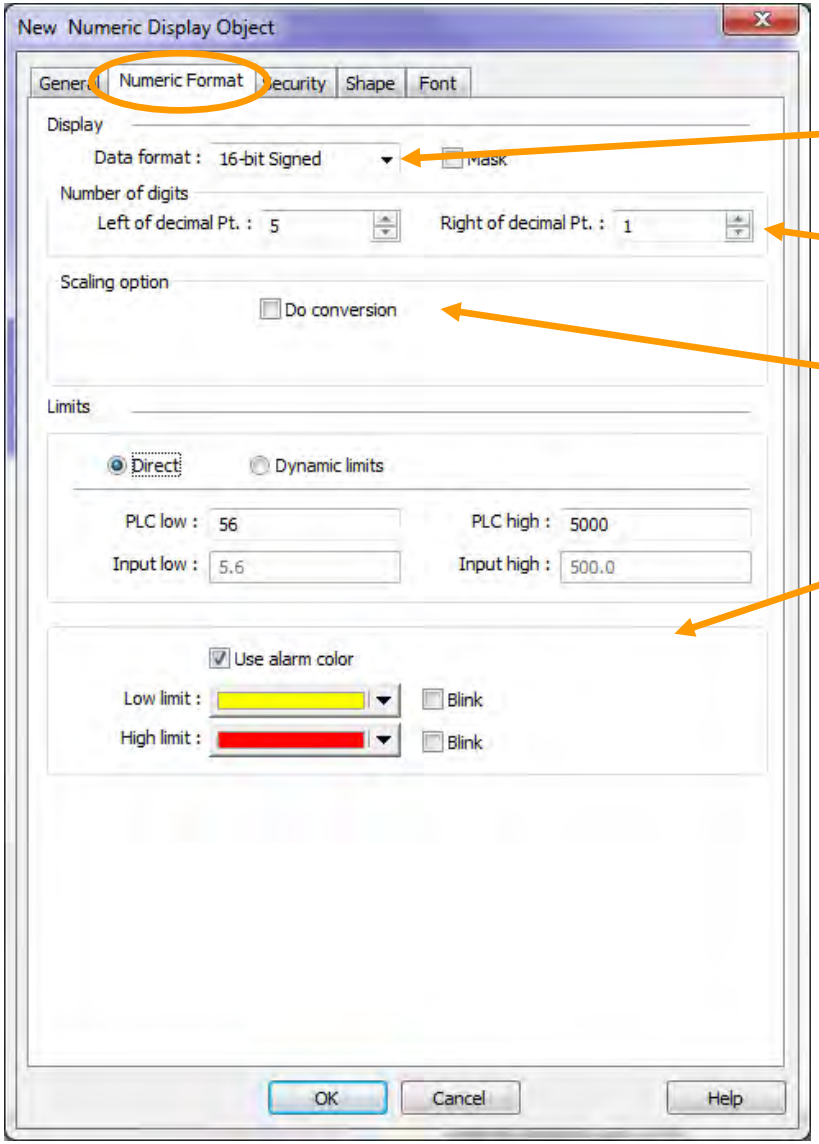


Step 2

This opens the window that allows to set the object parameters

- In the *General* tab set the *PLC name* from which the variable is read, and the read *Address*

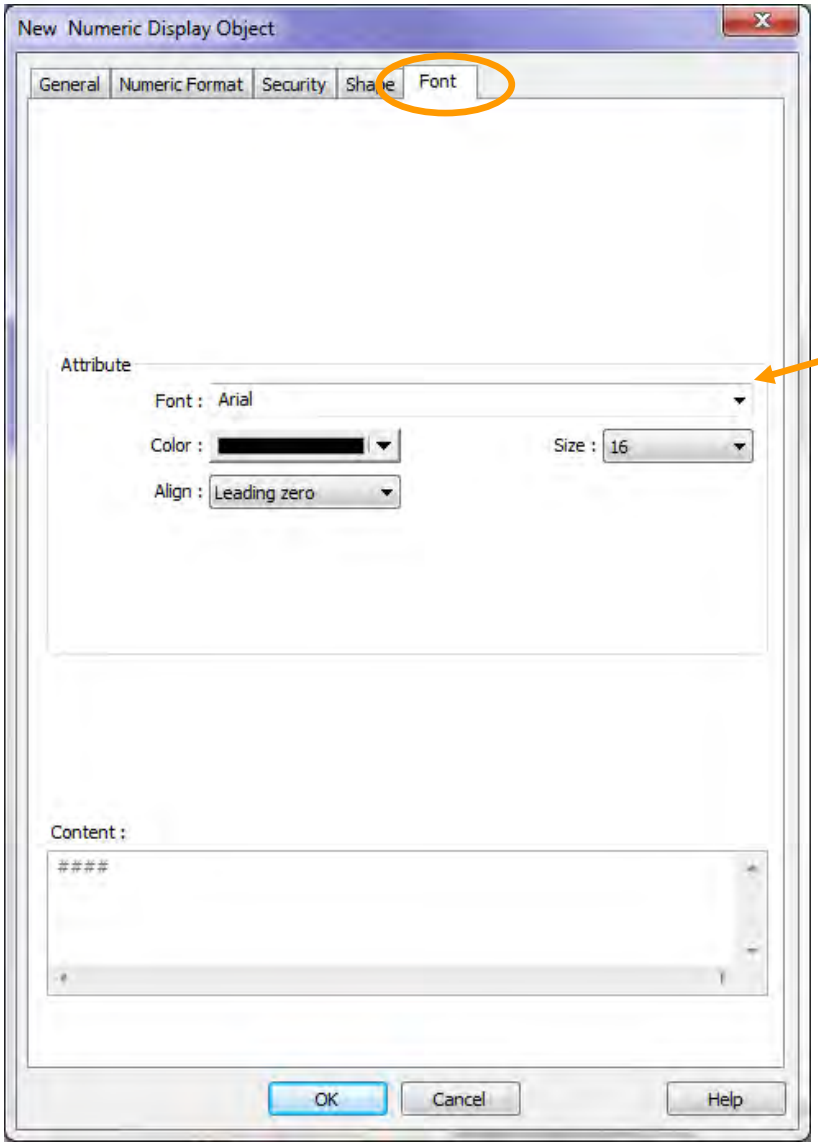
Creating a Numeric Display Object



Step 3

- In the *Numeric Format* tab set the *Data format* to *16-bit Signed*
- Set the *Number of digits* to the value range to be displayed
- Select and define the *Scaling option* if needed
- Tick *Use alarm color* to highlight values that are above or below the *Limits*. The limitations set in *Limits* do not restrict the display of the value

Creating a Numeric Display Object



Step 4

Set the parameters for *Security* and *Shape* as explained on pages 18 and 19

- Define the *Attribute* (especially Size and Align) in the *Font* tab
- Click *OK* and place the *Numeric Display Object* in the window

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Part 4

Creating an Input Object

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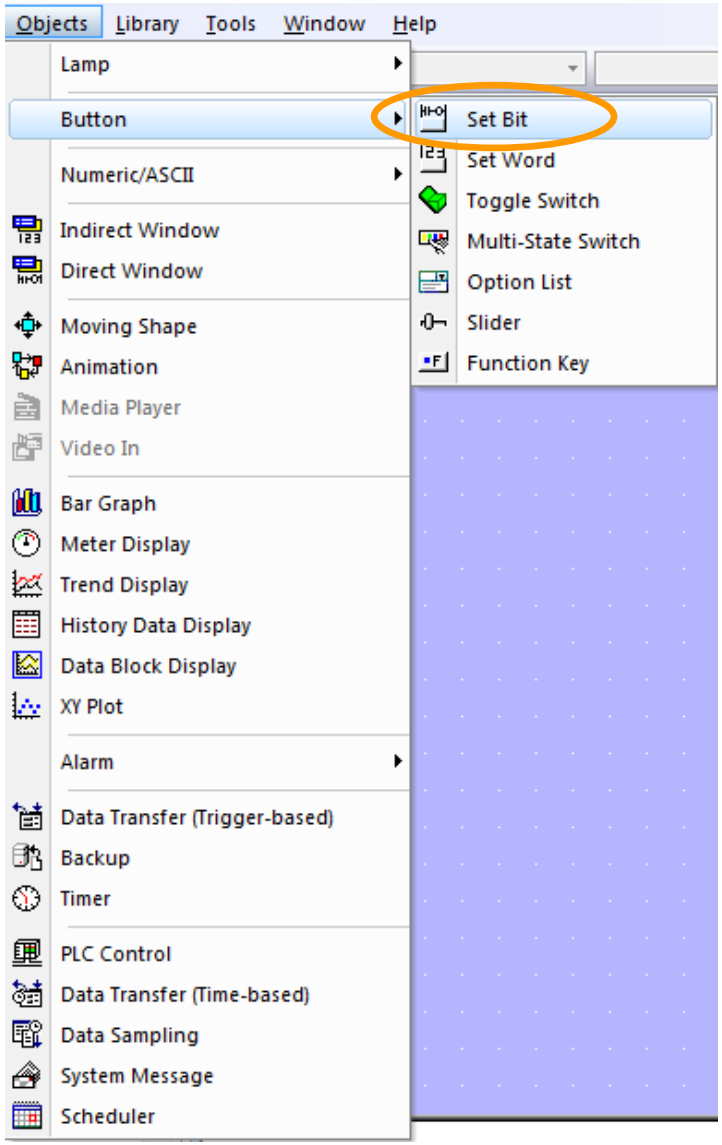
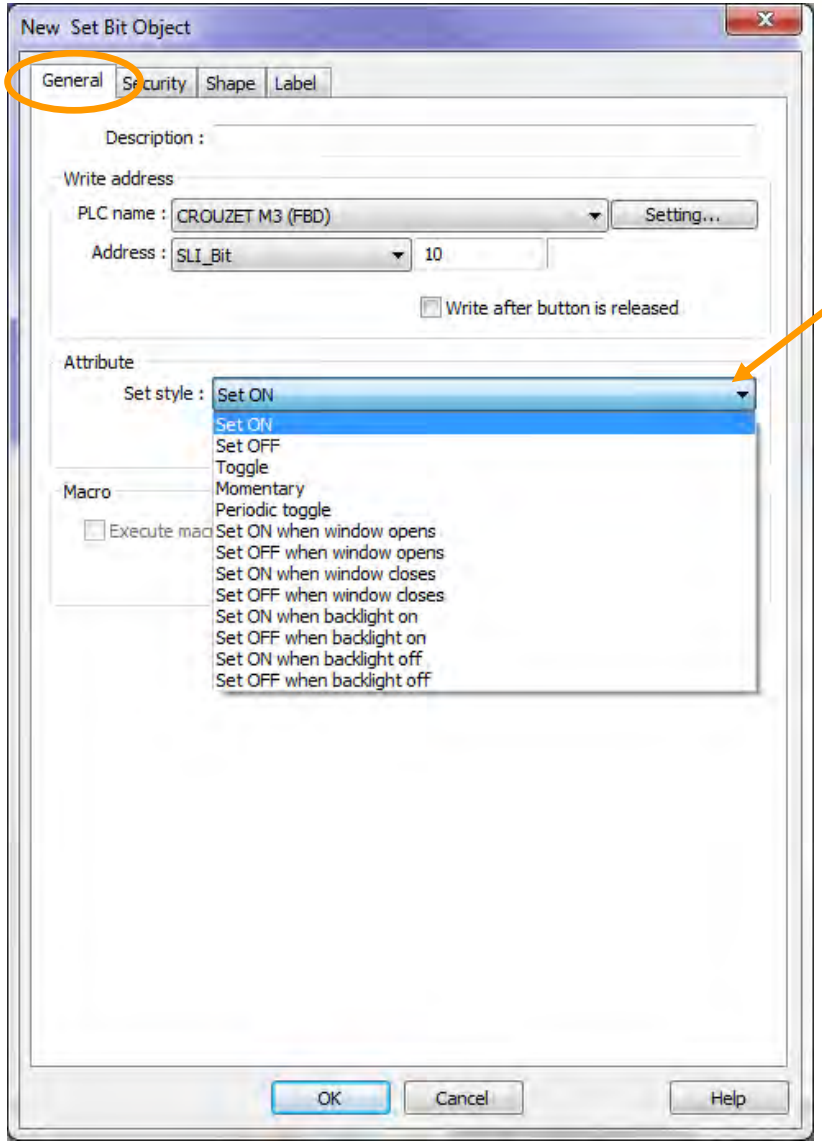
Creating an Input Object



To create an input object like *Set Bit* or *Numeric Input* the procedure and settings are basically the same as for the objects that were just described.

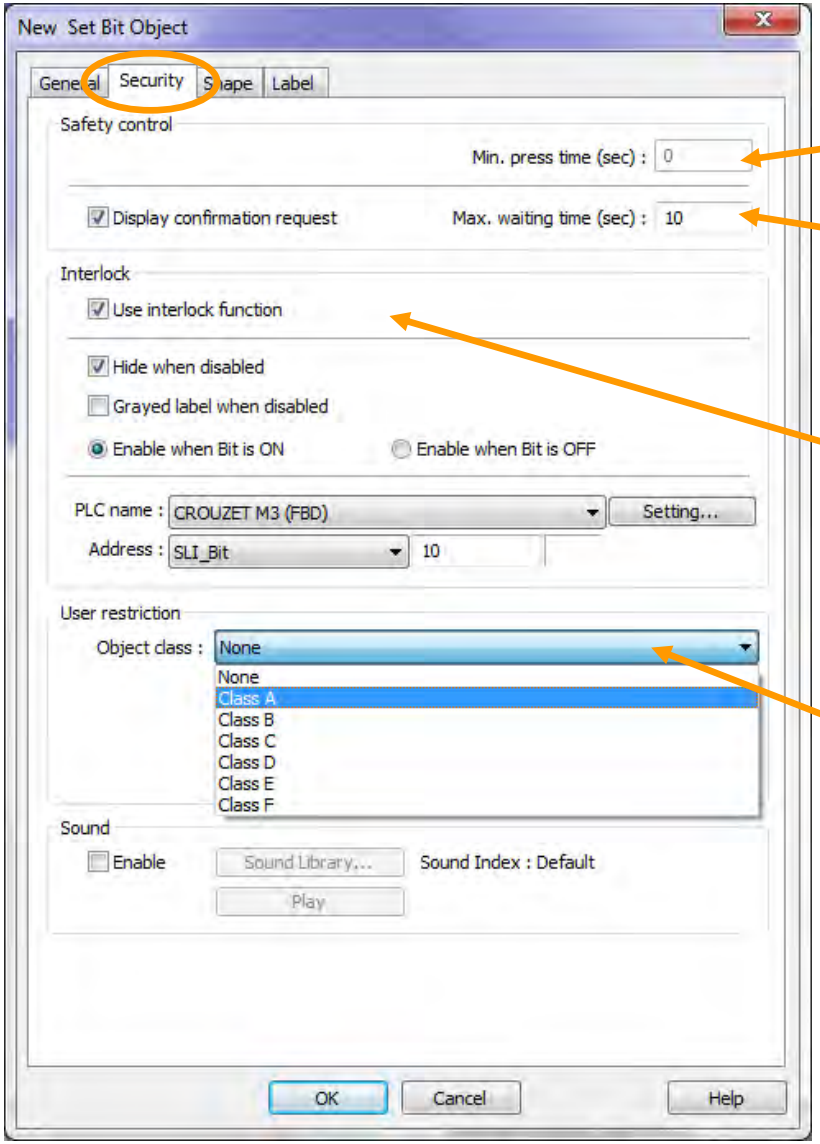
Creating an Input Object



The main differences to a 'display only' object are:

1. The *Attribute* options

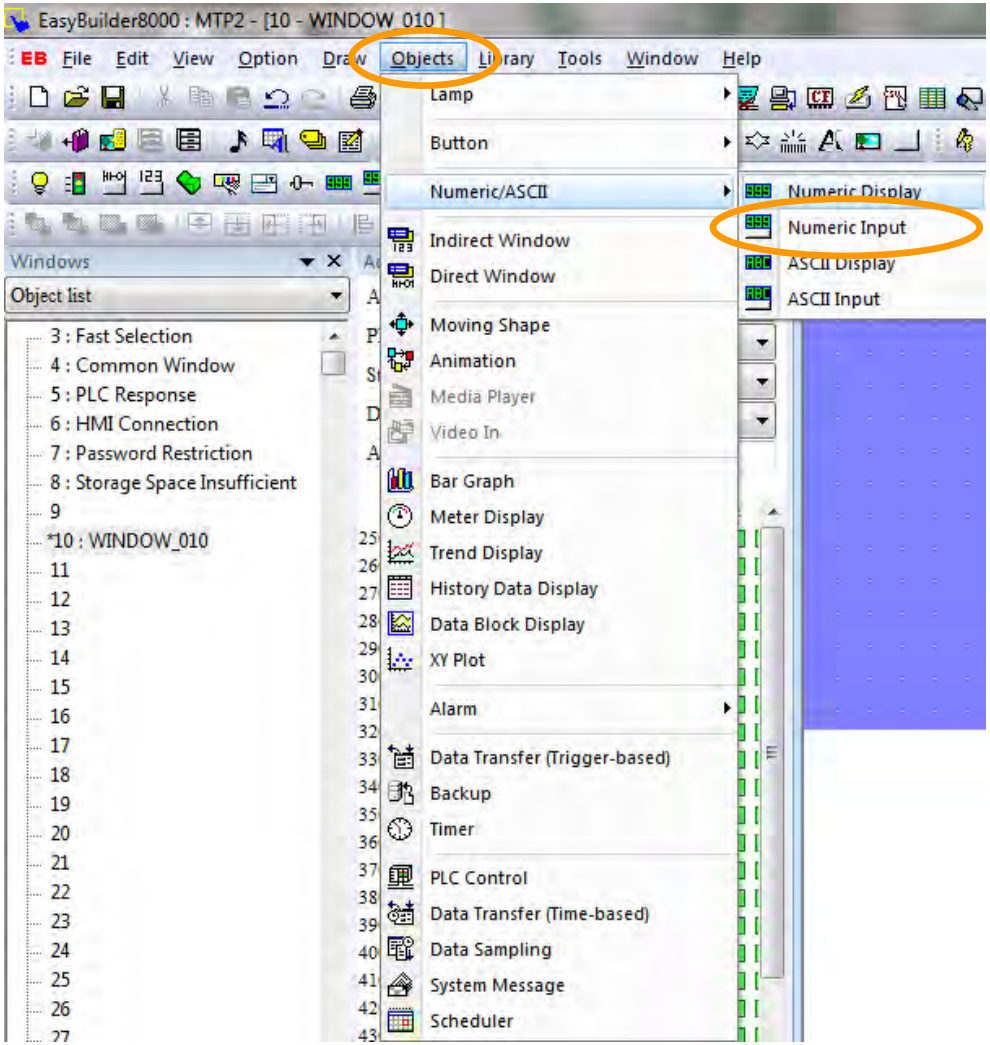
Creating an Input Object



2. The *Security* options

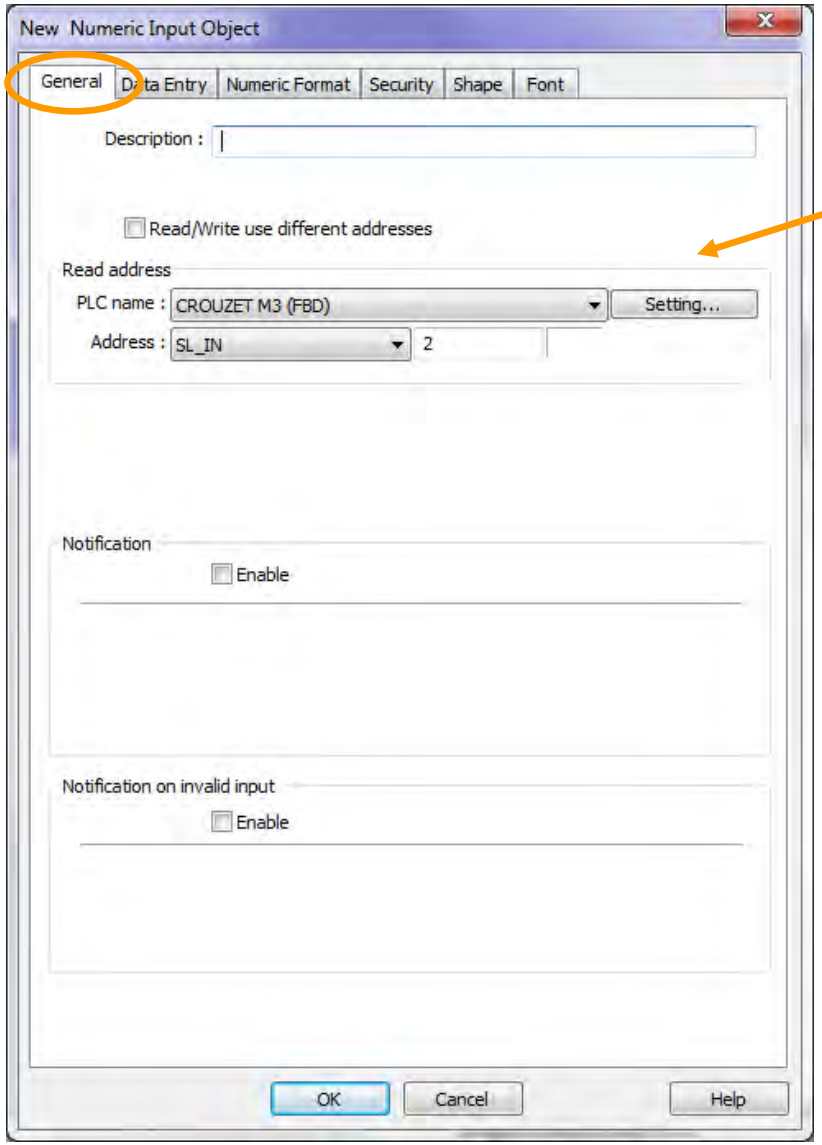
- It is possible to set a minimum pressure time for the action
- If marked, a *Display confirmation request* pop-up with a max. waiting time can be set
- If marked, the button can be hidden using a control bit, but it could also be displayed anyway even if disabled, and if there is a text label it can be grayed
- The object can be linked to an *Object class* and if required to an 'access denied' warning message (system page 7).

Creating a Numeric Input Object



- Open *Objects*, *Numeric/ASCII* and click on *Numeric Input*

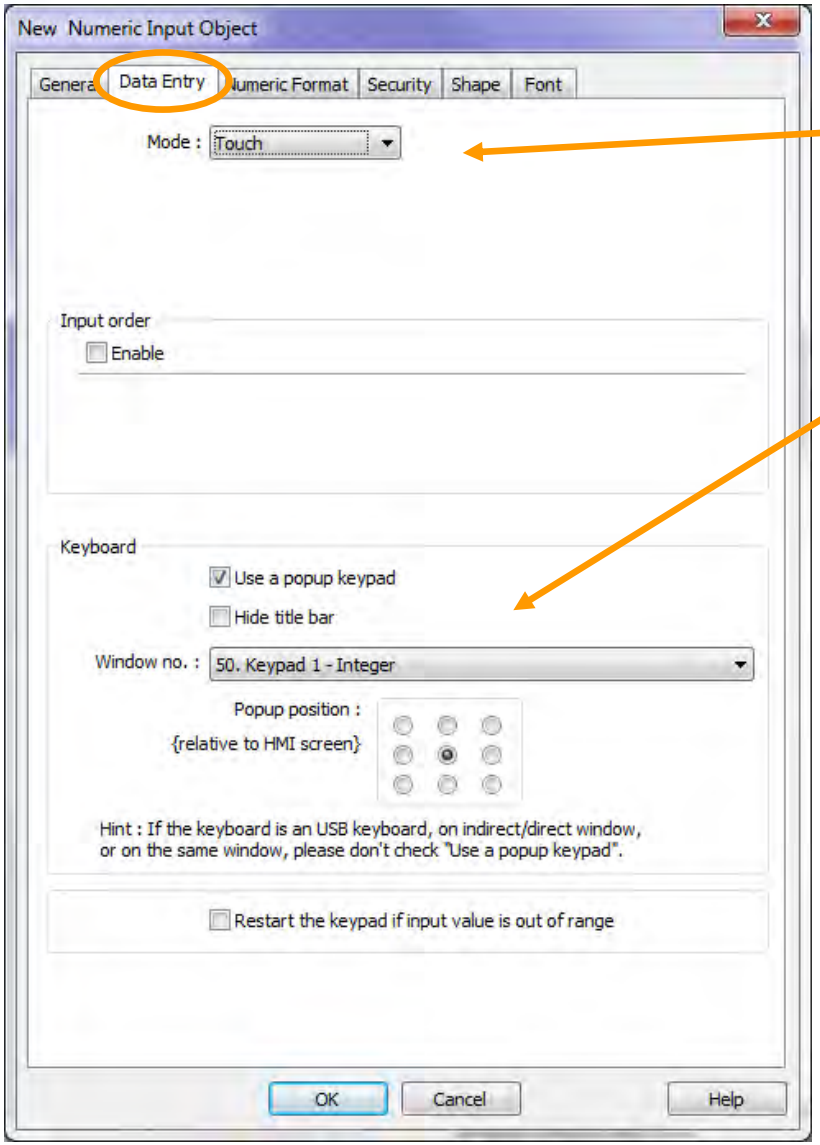
Creating a Numeric Input Object



Step 1

- In the *General* tab set the *PLC name* to which the variable is to be written, and the write *Address*

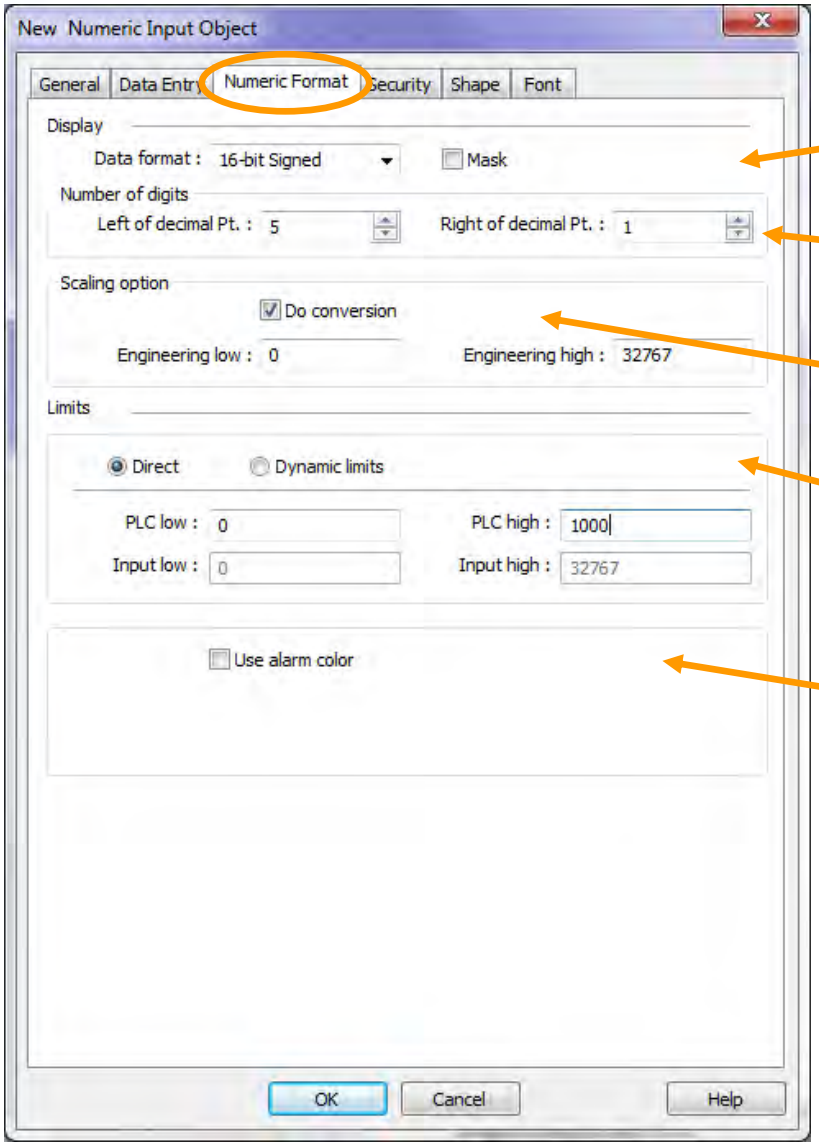
Creating a Numeric Input Object



Step 2

- Set the input activation *Mode*, *Touch* or *Bit Control*, in the *Data Entry* tab
- Select the *Keyboard* that is to be used and its *Popup position*

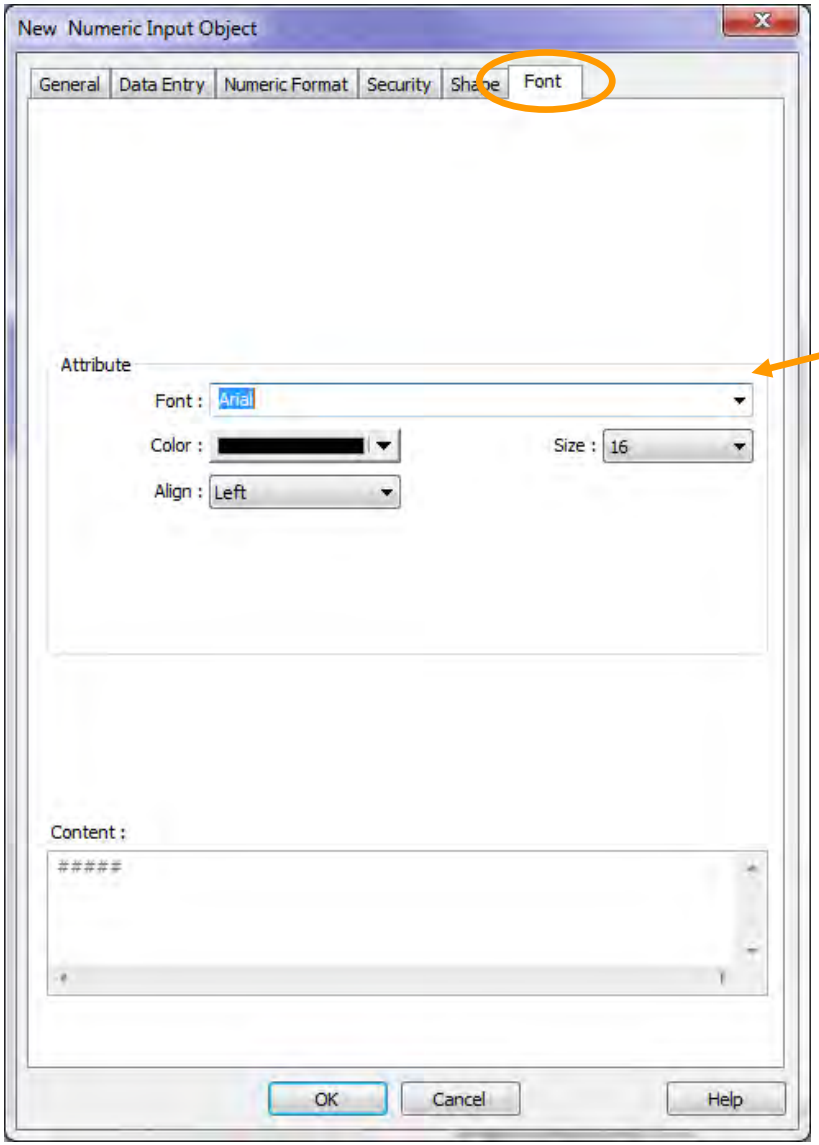
Creating a Numeric Input Object



Step 3

- In the *Numeric Format* tab set the *Data format* to *16-bit Signed*
- Set the *Number of digits* to the value range to be displayed
- Select and define the *Scaling option* if needed
- Define the *Limits* of the input value. Values exceeding the limits will be ignored
- Tick *Use alarm color* to highlight values that are above or below the *Limits*.

Creating a Numeric Input Object



Step 4

Set the parameters for *Security* and *Shape* as explained on pages 29 and 19

- Define the *Attribute* (especially Size and Align) in the *Font* tab
- Click *OK* and place the *Numeric Display Object* in the window